

### REMARKS / ARGUMENTS

For the convenience of the Examiner and clarity of purpose, Applicant has reprinted the substance of the Office Action in *10-point bolded and italicized font*. Applicant's arguments immediately follow in regular font. Unless specifically acknowledged in Applicant's arguments above, Applicant does not accede to the characterizations by the Patent Office of what the prior art disclosures or how it operates or functions. Applicant reserves the right to specifically challenge such characterizations at a later date.

***2. Claims 1-3, 6-9, 12-14, 17-20, 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Carter et al (5,036,858).***

***Carter et al teaches a device and method for acoustically stimulating the brain having a programmable signal generator (24) that generates two acoustical signals, a user interface (48) to adjust the parameters, including the frequency and volume and first and second ear pieces that (32 and 36) for stimulating the brain into a desired state. Carter et al teaches (column 1, lines 10-29) using different frequencies between 1 hertz and 10 hertz for treating problems such as trouble learning or sleeping problems.***

U.S Patent No. 5,036,858 to Carter et al discloses a "Method and Apparatus for Changing Brain Wave Frequency" and requires "determining the actual current brain wave frequency of the a user ...". See, e.g., USP 5,036,858 at Col. 2, lns. 15 – 20. The structure disclosed to determine the current brain wave activity is "means such as electrodes 18 and amplifier 20 for determining a current brain wave of a user 22." *Id.* at Col. 3, lns 13 – 15. The disclosed invention uses the current brain wave frequency thusly:

First and second signals having first and second frequencies are then generated, the frequency difference being between the current brain wave frequency and the desired brain wave frequency, but also being within a certain range of the current brain wave frequency.

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Id. at Col. 2, Ins. 20 – 25; Col. 3, Ins. 19 – 23. USP 5,036,858 has no disclosure or teaching of the benefit of or a structure for generating one or more brain stimulating signals without determining a current brain wave activity of the user of the device.

Independent claims 1 and 12 have been amended to specifically require that that the “system does not determine an actual brain wave activity of the user.” Thus, USP 5,036,858 cannot anticipate independent claim 1 or 12, or their dependent claims (i.e., claims 2, 3, 6-9, and 13, 14, 17-20) because the reference does not explicitly or implicitly disclose the benefit of or a structure for generating one or more acoustical signals without reference to a current brain wave activity of the user of the device.

Similarly, independent claim 23 has been amended to require that the primary acoustic signal is generated without determining an actual brain wave activity of a user. USP 5,036,858 cannot anticipate independent claim 23 or its dependent claims (i.e., claims 24-26 because the reference does not explicitly or implicitly disclose the benefit of or a structure for generating one or more acoustical signals without reference to a current brain wave activity of the user of the device. The Examiner will note that the secondary acoustic signal in claim 23 has not been limited in this regard.

Applicant submits that these amendments overcome the rejections. Reconsideration of these claims is requested.

**4. Claims 4-5, 15-16 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al in view of Masaki (4,834,701).**

***Carter et al discloses the claimed device except for specifically showing the use of sine waves. Masaki discloses a similar device that produces two different signals that are delivered to a person's ears to stimulate the brain and teaches that it is well known to use sine waves as the acoustical signals. Therefore a modification of Carter et al such that the signals used are sine waves or forms of sine waves would have been obvious since Masaki shows that sine waves are routinely used as acoustical signals to stimulate the brain.***

The subject matter of a claim may be rendered obvious by a combination of prior art references only when there is 1) a suggestion or motivation to combine the disclosures of the references; 2) a reasonable expectation that the combination will succeed; and when the combined references disclose all of the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); MPEP § 706.02(j).

Even if it were appropriate to combine the disclosures of USP 5,036,858 and U.S. Patent 4,834,701 to Masaki, a proposition to which Applicant does not accede, the resulting combination would not contain all of the limitations of amended claims 1, 12 and 23, as detailed above. The ability of the invention in claims 1 and 12 to be used without having to directly determine the current brain wave activity of the user (as required by USP 5,036,858) is believed to be a significant advantage to the user.

Thus, because independent claims 1, 12 and 23 are patentable over the allegedly proper combination of USP 5,036,858 and USP 4,834,701, rejected claims 4-5, 15-16 and 27 are likewise patentable. Reconsideration of these claims is requested.

**6. Claims 9 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**Claims 9 and 20 appear to be directed to the intended use of the device and fail to provide and further limitations to the apparatus.**

Applicant has amended claims 9 and 20 to require that the “system is programmed to generate” the desired effects. Applicant contends this is a structural limitation and, therefore, overcomes the rejection. Reconsideration of these claims is requested.

**7. Claims 10-11 and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

Applicant thanks the Examiner for his efforts on this case and his favorable consideration of these claims. At the present time, and in favor of the arguments and amendments made above, Applicant chooses not to re-present these claims at this time.

**8. The information disclosure statement filed 08/29/03 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered. With regard to the above information disclosure statement it appears that there is only 1 page while it is indicated that there are 2 pages. The page listing the Foreign Patent Documents and Other Art appears to be missing.**

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Applicant does not fully understand the Examiner's stated reasons for not considering the Information Disclosure Statement filed in this case on August 29, 2003, as the submitted Form 1449 appears to comply with the identified Rule. In any event, Applicant submits herewith another Form 1449 listing the previously listed references (and several other references) for consideration by the Examiner.

***9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wilson et al is cited to further show the state of the art.***

At this time, Applicant makes no response to the Examiner's characterization of the prior art of record, but Applicant reserves its right to respond at later date, if necessary.

#### **Other Amendments and New Claims**

In addition to the amendments set forth above, Applicant has amended claims 1 and 12 to eliminate potential uncertainties in the claim language. Claim 26 has also been amended to more particularly point out and claim the particular invention.

New claims 28 – 31 have been presented. New claim 28 requires that the secondary acoustic signal be generated without determining an actual brain wave frequency of the user. New claim 29 requires that at least one of the acoustical signals is compound (see paragraph [0026]). New claim 30 requires that a phase difference between the acoustical signals (see paragraph [0025]). Lastly, new claim 31 requires the system be sized to fit in a hand of the user (see paragraph [0015]).

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### **INFORMATION DISCLOSURE STATEMENT**

Submitted herewith is a two (2) page Form 1449 listing 19 U.S. Patents/Published Applications, 0 Foreign Patents/Published Applications and 2 Non-patent references, in compliance with 37 CFR §§1.56, 1.97 and 1.98. Because this application was filed after June 30, 2003, copies of the U.S. Patents/Published Applications are not provided

Please note that that both of the non-patent references were published after the filing date of this application. The "Clinical Study" may be of interest because of its historical discussion and its bibliography. The excerpts from Applicant's book discuss experimental testing that began prior to filing of the subject application.

Full consideration of each of these references is requested.

### **CONCLUSION**

The only fees thought due for this paper and its related submissions is the IDS fee of \$180 and the new claim fee of \$100. The Commissioner is hereby authorized to charge these fees and any other fee necessary to make this and related papers timely and effective, to deposit account 12-1322 (021819-001US).

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Applicant thanks the Examiner for his consideration and effort on this case and submits that this application is now in condition for allowance. Applicant respectfully requests that a timely Notice of Allowance be issued.

Respectfully submitted,

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